

# Panel 2: Workplace Issues



Stephanie Pratt, PhD

National Institute for Occupational Safety and Health

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*Awake, Alert, Alive: Overcoming the Dangers of Drowsy Driving*

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# Drowsy driving in the workplace

- Overwhelming research/policy focus on drowsy and fatigued driving among heavy-truck drivers
- Other work situations, industries, and occupations also place workers at risk



# What aggravates drowsy-driving risks for workers?

- Driving at work, combined with commuting to and from work
- Long hours of work, shift work, rotating work shifts, physical exertion, poor and insufficient sleep



# Work-related crashes and commuting crashes: Definitions and data systems

Work-related crash	Commuting crash
<ul style="list-style-type: none"><li>• Incident on or off employer's premises, AND person was there to work</li><li>• Incident in travel status</li></ul>	Not a work-related crash (unless on employer premises)
Identified as such in DOL and DOT data systems	<ul style="list-style-type: none"><li>• Out of scope for DOL data systems</li><li>• Not identified as such in DOT data systems</li></ul>

Bureau of Labor Statistics [2014]. Census of Fatal Occupational Injuries (CFOI): Definitions.  
<http://www.bls.gov/iif/oshcfdef.htm>

# Selected studies on drowsy driving among non-CMV drivers

- Barger et al. (2005): Medical residents at elevated crash risk after extended work shifts
- Di Milia and Kecklund (2013): Among early-morning long-distance drivers, night workers were more likely to be sleep-restricted and suffer chronic and acute sleepiness
- Di Milia (2006): 89% of mine workers drove immediately after most recent night shift (mean distance 211 km)
- Philip et al. (1999): Time spent driving in last 24 hr, night and early-morning driving, and being at work were associated with greater sleep debt

# Drowsy driving and the changing nature of work

- Labor force goes where resources are
- 24/7 operations
- Longer work shifts
- Long hours of driving during the work day
- Commutes home after long/consecutive/rotating shifts
- “Just-in-time” commuting to work location
- Some workers choose to make daily “mega-commutes”

# Commuting crashes in the oil and gas industry

- Texas (2014): 3 workers commuting from drilling site after 24-hour shift killed when their van hit a school bus
- Texas (2013): 3 workers killed during commute after working 190 hours over 14 consecutive days

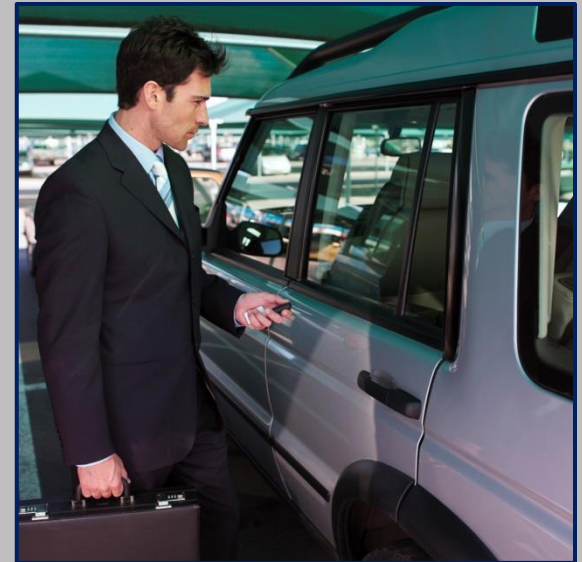


Olsen L [2014]. Fracking boom increases 'triple tragedies' on Texas highways; Drilling crew fatigue major factor in number of multi-fatality wrecks on roads across state. *Houston Chronicle*, September 16, 2014.



# Other drowsy-driving risk situations for non-CMV drivers

- Sales representatives: Driving to cover sales territory, combined with commuting
- Home health workers: Driving from client to client
- Early-morning drives to reach distant work locations
- On-the-job driving or commuting, combined with air travel





# Drowsy-driving countermeasures

## Work-related travel:

- Question the need for travel
- Seek safer modes for essential travel
- Build flexibility into journey management policies
- Limit driving after long flights

## Commuting:

- Offer hotel rooms for overnight stays before driving home
- Provide mass transport after shift block ends

# The importance of supervisory involvement

- Emphasize responsibility of first-line supervisor to work with employee to reduce driving while traveling for work purposes
- Advise supervisors to consider commuting time when scheduling travel
- Assign a journey manager:
  - Knows trip details – driver, vehicle, destination, route
  - Acts as emergency point of contact
  - Consulted for adjustments to trip plan

# Additional implementation challenges

- Difficulty in imposing requirements on workers' transport choices or sleep outside of work hours
- Lack of personal awareness of fatigue and drowsiness levels
- The aging workforce: Medical conditions, prescription/nonprescription medications, age-related changes in sleep patterns
- Expectations that workers will be on call for 24/7 operations



# Conclusions

- Risks for drowsy driving affect workers other than CMV drivers.
- Shift work, long hours of work, long hours of driving during the work day, and commuting may exacerbate these risks.
- Little is known about the effects of extended hours of work-related driving combined with lengthy commutes.
- Countermeasures exist, and supervisory involvement is instrumental for their successful implementation.

Stephanie Pratt, PhD  
Coordinator, NIOSH Center for  
Motor Vehicle Safety  
Phone: (304) 285-5992  
E-mail: sgp2@cdc.gov


Web:  
<http://www.cdc.gov/niosh/topics/motorvehicle>



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**NIOSH Center for  
Motor Vehicle Safety**  
/// Keeping Workers Safe on the Road

How can I get more information about the Center?

To see the Center's 5-year strategic plan and learn more about the Center's research and publications, visit the NIOSH Motor Vehicle Safety web page at: <http://www.cdc.gov/niosh/topics/motorvehicle> and follow us on Twitter.

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Truck drivers have the highest risk of work-related motor vehicle fatalities of any occupation.  
#RoadsThinkBack

**What is the NIOSH Center for Motor Vehicle Safety?**

The Center coordinates a NIOSH initiative to prevent work-related motor vehicle crashes, which account for 35% of worker fatalities in the U.S. It is hosted by the Division of Safety Research in Morgantown, West Virginia. Researchers in the Center have expertise in epidemiology, safety engineering, psychology, injury surveillance, crash investigation, safety management, human factors, and policy analysis. Many of the Center's projects focus on workers at highest risk, such as truck drivers and emergency responders. Other projects address road safety for workers in all industries and occupations.

**What is the mission of the Center?**




The NIOSH Center for Motor Vehicle Safety uses a multidisciplinary approach to conduct research, evaluate interventions, communicate prevention information, and foster partnerships to protect workers from work-related motor vehicle crashes and resulting injuries.

**How does the Center set priorities?**

The Center for Motor Vehicle Safety has developed a strategic plan to guide its work through 2018. The plan is based on goals in five strategic areas:

- Advancing understanding of risk factors for work-related crashes
- Implementing engineering and technology-based safety interventions
- Implementing comprehensive, evidence-based road safety management policies
- Engaging in global collaborations to prevent work-related crashes
- Making clear and concise guidance and information products available to workers, employers, and other stakeholders

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